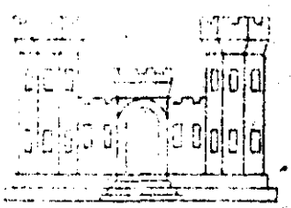
101-610A

RESTRICTED

SURVEY (REVIEW OF REPORTS) OF

BOSTON HARBOR

MASSACHUSETTS



AUTHORITY - THIS REPORT IS SUBMITTED IN COMPLIANCE WITH RESOLUTION, ADOPTED 2 APRIL 1943, BY THE COMMITTEE ON RIVERS AND HARBORS OF THE HOUSE OF REPRESENTATIVES, UNITED STATES.

U. S. ENGINEER OFFICE
BOSTON, MASS.

8 NOV. 1943

COPY NO. 17

REEXAMINATION OF BOSTON HARBOR, MASSACHUSETTS

Syllabus

The district engineer is of the opinion that, in view of the definite trend toward the use of land planes for transatlantic air service, provision by the Federal Government of a seaplane channel and basin at any location in Boston Harbor is not warranted at the present time. He therefore recommends that legislation be enacted authorizing the abandonment of that part of the existing project for Boston Harbor, Massachusetts, recommended in House Doc. No. 362, 76th Congress, 1st session, and authorized by the River and Harbor Act of 17 October 1940; namely, the provision of a seaplane channel 12 feet deep and 1,500 feet wide, extending northwesterly from President Roads 17,500 feet to the easterly margin of Boston Airport (now officially designated the General Edward Lawrence Logan Airport) and deposit of excavated material in such places as will permit enlargement of the airport.

War Department
United States Engineer Office
Boston, Massachusetts
8 November 1943

Subject: Survey (Review of Reports) on Boston Harbor, Massachusetts

To: The Chief of Engineers, U. S. Army, through the Division Engineer, New England Division

1. Authority.- This report is submitted in compliance with the following resolution, adopted 2 April 1943 by the Committee on Rivers and Harbors of the House of Representatives, United States:

> "RESOLVED BY THE COMMITTEE ON RIVERS AND HARBORS OF THE HOUSE OF REPRESENTATIVES, UNITED STATES, That the Board of Engineers for Rivers and Harbors created under section 3 of the River and Harbor Act, approved June 13, 1902, be and is hereby, requested to review the reports on Boston Harbor, Massachusetts, submitted in House Document Numbered 362, Seventy-sixth Congress, first session, with a view to determining if the recommendations therein submitted should be modified in any way at this time."

2. Report under review.- The report under review was authorized by a resolution of the Committee on Rivers and Harbors of the House of Representatives, adopted 17 November 1938. This report recommended further modification of the existing project for Boston Harbor, Massachusetts, "to provide a seaplane channel 12 feet deep and 1,500 feet wide, extending

northwesterly from President Roads 17,500 feet to the easterly margin of Boston Airport, and for deposit of excavated materiel in such places as will permit enlargement of the airport, all generally in accordance with the plan contained in the report of the district engineer, at an estimated first cost of $2,300,000 with annual maintenance of $60,000, in addition to that now required and previously recommended; subject to the provisions that local interests furnish, free of cost to the United States, as and when required, all lands, easements, and rights-of-way and spoil-disposal areas for the initial work and for subsequent maintenance; hold and save the United States free from claims for damages resulting from the improvement; and give assurances satisfactory to the Secretary of War that they will, at their expense, provide suitable bulkheads, dikes, or other structures for retention of excavated material".

3. The recommended modification of the project was adopted by Congress in the River and Harbor Act of 17 October 1940.

4. Description.- Boston Harbor is situated on the westerly side of Massachusetts Bay. The harbor, which is well protected, includes all the tidewater lying within a line from Point Allerton to Point Shirley, comprising an area of about 47 square miles, exclusive of the islands. From the entrance between these two points, which is about 5-3/8 miles wide, the approach to the harbor proper is through three improved main channels of entrance with mean low water depths of 27, 30, and 35-and-40 feet from the sea to President Roads. The main ship channel, extending from President Roads to the head of the harbor, provides a depth of 35 feet for a width of 1,200 feet in the 6-mile reach from President Roads to the principal terminals at Boston; and a depth of 40 feet for a width of 600 feet in the 4-1/2 mile reach from President Roads to East Boston. Branch and subsidiary channels and 30- and 40-foot anchorages have also been provided in the harbor. The mean range of tide in the inner harbor is 9.6 feet, the extreme range being about 4 feet greater. There are no bridges over the portion of the harbor with which this report is concerned. The improvement under

consideration in this report would not result in any shoreline changes, nor would it involve any questions of land reclamation, water power, flood control, or other special subjects. The location of Boston Harbor, its channels and anchorages is shown on United States Coast and Geodetic Survey Charts Nos. 246 and 248, and on the accompanying map.

5. Tributary area.- Boston, with a population of 770,816 (1940), is the largest city in New England and is the center of an important manufacturing section. It is the wholesale and jobbing center for practically all of New England, serving a population of nearly 8,000,000. In time of peace it has direct service to all important South American and European ports and enjoys an extensive coastwise trade. Under normal conditions, large quantities of foreign raw materials are imported, which include wool, hides and leather, sisal, hemp, coffee, and sugar. The port is also the center of the largest deep-sea fishing industry in the United States. The metropolitan area, which includes 33 independent municipalities within 20 miles, has a population of approximately 2,351,000.

6. The area immediately tributary to the section of the harbor under consideration in this report is East Boston, a densely populated section of Boston lying to the north and east of the inner section of the main ship channel. East Boston is separated from Boston proper and Charlestown by the main ship channel, and from Chelsea by Chelsea Creek. East Boston is served by the Boston & Maine and Boston & Albany Railroads, for freight service only. Passenger service between East Boston and Boston proper is provided by a street railway system, a part of which is rapid transit which passes through a tunnel beneath the harbor. Another under-harbor tunnel accommodates vehicular traffic between Boston and East Boston. This traffic tunnel, for the use of which the City of Boston charges a toll of 20 cents per vehicle, provides the quickest and most direct route for automobiles and trucks bound between Boston and East Boston. However, there are also highways connecting East Boston with Chelsea, via the Meridian Street and Chelsea Street Bridges.

7. Prior reports.- Except for the report under review, referred to in paragraph 2 above, all previous reports on Boston Harbor pertain only to improvements for the benefit of waterborne commerce. Therefore, a description of these reports is not considered pertinent to the matter under consideration herein.

8. Existing project.- In addition to numerous improvements for the benefit of navigation, the existing project for Boston Harbor, Massachusetts, provides for a seaplane channel 12 feet deep at mean low water and 1,500 feet wide, extending northwesterly from President Roads, 17,500 feet to the easterly margin of Boston Airport, and deposit of excavated material in such places as will permit enlargement of the airport, subject to certain conditions of local cooperation. The estimated first cost of this portion of the existing project is $2,300,000, with $60,000 for its annual maintenance. The project for the seaplane channel was adopted by the River and Harbor Act of 17 October 1940. No work has been done on this portion of the existing project.

9. Local cooperation.- The River and Harbor Act of 17 October 1940, in authorizing the dredging of the seaplane channel, required that local interests furnish, free of cost to the United States, as and when required, all lands, easements, and rights-of-way and spoil-disposal areas for the initial work and for subsequent maintenance; hold and save the United States free from claims for damages resulting from the improvement; and give assurances satisfactory to the Secretary of War that they will, at their expense, provide suitable bulkheads, dikes, or other structures for retention of excavated material. To date these requirements have not been complied with, although the Commonwealth of Massachusetts, prior to the initiation of its present plans for the development of the Commonwealth Airport, had expressed its willingness to meet these requirements in the event Federal funds were made available for the provision of the seaplane channel. All prior requirements of local cooperation (which were in connection with navigation improvements) have been fully complied with.

10. Other improvements.- There is a dredged channel approximately 2,000 feet long and 350 feet wide, in which depths ranging from 10 to 30 feet at mean low water were originally provided, leading from the Bird Island Anchorage to the vicinity of the existing small seaplane ramp and marine railway on the southerly side of the Commonwealth Airport. At the inner end of this channel, along its easterly side, there is a basin, approximately triangular in shape, having an area of about 4 acres and depths ranging from 8 to 12 feet at mean low water. While these dredged areas provide an approach channel to the existing seaplane facilities and a basin for small seaplanes, these areas were not dredged for this purpose. This dredging was done by the Commonwealth of Massachusetts over 20 years ago in connection with a proposed pier development at this locality which was never carried out.

11. Terminal facilities (air).- Commercial air transportation in and out of Boston uses the General Edward Lawrence Logan Airport at East Boston, which is owned and operated by the Commonwealth of Massachusetts. This airport is more commonly referred to as the Commonwealth Airport, and is so designated in this report. (At the time the report under review was submitted, this airport was municipally owned and was known as the Boston Airport.) This airport, which is located on the northerly side of the main ship channel, lies between East Boston, Winthrop and Governors Island. The area occupied by the airport was formerly a shoal section of the harbor. Reclamation of the area was accomplished by hydraulic dredging in its vicinity. The present air field is roughly rectangular in shape, about 4,000 feet long by 2,700 feet wide, and approximately 300 acres in area. It is partially inclosed by timber bulkheads.

12. The existing facilities include an Administration Building which serves both as the headquarters office building of the airport and also as the passenger terminal. There are 7 concrete runways 100 feet wide, ranging in length from 300 to 900 feet, located to provide for flights in various directions. A concrete apron 300 feet wide in front of the Administra-

tion Building serves as a loading area. There are a number of hangars, including those owned or leased by American Airlines, Inc. (regular commercial service); Northeast Airlines (regular commercial service, and training and operations unit); Inter-City Airlines; E. W. Wiggins Airways, Inc.; U. S. Army Air Corps Service Detachment; Civil Aeronautics Administration Air Carrier Inspection Department; Massachusetts National Guard; etc. There is also a building for repair parts. Boundary lights, flood lights, and a radio control tower are operated.

13. On the south side of the field there is a seaplane ramp about 20 feet in width and a marine railway of approximately 3-1/2 tons' capacity, maintained for the use of small seaplanes.

14. The Commonwealth of Massachusetts purchased the airport from the City of Boston about two years ago at a cost of $1,026,800, and since that time the Massachusetts Legislature has authorized a bond issue of $4,750,000 to be used toward developing the Commonwealth Airport into a completely modern terminal for commercial land planes. This development as presently proposed is shown on the accompanying print of a plan titled "Proposed Runway Layout, Commonwealth Airport, Boston", dated June 1943. The plan of development calls for the enlarging of the airport by the hydraulic placement of fill in an area of sufficient size to provide runways with lengths up to 7,000 feet, which it is expected will in the future be extended to 10,000 feet. Heavier material taken from Governors Island is to be placed on the hydraulic fill over the runway areas. On 28 September 1943 the Commonwealth of Massachusetts invited bids, to be opened 26 October, for the hydraulic filling of a considerable portion of the airport area. Only one bid was received, and this was greatly in excess of the amount appropriated for the work. The Commonwealth now plans to readvertise the work, dividing it into smaller sections in order to attract competitive bidding.

15. Improvement desired.- In order to obtain the views of the interested parties concerned, a conference was held at Boston, Massachusetts,

on 27 August 1943 at which the following interests were represented: The Massachusetts Department of Public Works, by its Commissioner, Director of Waterways, and technical consultant from the Massachusetts Institute of Technology; the Massachusetts Aeronautical Commission, by its Chairman; the Civil Aeronautics Administration, by its local Airport Engineer; the Boston Port Authority, by its Acting Chairman and General Manager; the Boston Chamber of Commerce, by the Chairman of its Aviation Committee; and the Maritime Association of the Boston Chamber of Commerce, by its Manager and the Chairmen of its Governing Board and Committee on Navigation. Both prior and subsequent to this conference personal interviews were held with various interested parties, and additional data were also obtained by correspondence with the leading airlines which are now operating in this section of the country or have indicated their intention of doing so in the post-war period.

16. The primary purpose of the resolution under which this study is made was stated by the representatives of the Massachusetts Department of Public Works, at whose request the resolution was presented for adoption, to be the obtaining of a recommendation for abandonment by Congress of the seaplane channel as authorized by that body in the River and Harbor Act of 17 October 1940, for the reason that as long as this seaplane channel remains an authorized project it presents an obstacle to the development of the Commonwealth Airport as now planned, in that it prevents the provision at the airport of runways of a length adequate to serve the needs of modern land planes.

17. All of the interests represented at the conference were in substantial agreement that, in order to accomplish the development of the Commonwealth Airport as planned, which is conceded by all concerned to be of vital importance to the future of Boston as a major air terminal, it is a practical necessity to abandon the site at present authorized for a seaplane channel and basin. However, the representatives of the Maritime Association of the Boston Chamber of Commerce stated it as their belief that seaplanes

will play an important part in post-war air commerce and that, therefore, a seaplane channel will be necessary in Boston Harbor for post-war commercial use. They requested that, if the present location is abandoned, a seaplane channel and basin be authorized at another locality.

18. In presenting its request that the present seaplane channel and basin be abandoned, the Massachusetts Department of Public Works, at the conference of 27 August 1943, presented for discussion an alternative seaplane channel and basin in Dorchester Bay, Boston Harbor. This, however, did not meet with the approval of the representatives of the Maritime Association of the Boston Chamber of Commerce, who were emphatically of the opinion that any seaplane channel and basin provided should be in close proximity to the Commonwealth Airport to promote the expeditious transfer of passengers and freight between seaplanes and land planes, obviate the necessity for the duplication of shore facilities, and otherwise coordinate seaplane and land plane travel.

19. It was brought out by the representatives of the Maritime Association that the Commonwealth had, earlier in the year, suggested a location for a seaplane base on the southerly side of the airport which would be, in effect, an enlargement of the small seaplane base which now exists there. This suggested development is shown on the map which accompanies this report. The Maritime Association representatives stated that, in their opinion, a seaplane base at this locality would be much more desirable than the one proposed by the Commonwealth in Dorchester Bay, and inquired why consideration of this development had been dropped. The Director of the Division of Waterways explained that there was no objection to it from the standpoint of the Commonwealth, but that it had been their understanding that the Maritime Association objected to the location because of the necessity for using the 35-foot main ship channel for taxiing seaplanes in and out of a base at that locality. The Maritime Association representatives replied that they did not consider this an insurmountable objection, and the consensus of opinion among them at the close of the conference ap-

peared to be that consideration should be given by the Department to relocating the seaplane base at the location on the southerly side of the airport, as shown on the accompanying map.

20. Subsequent to the conference of 27 August 1943, under date of 1 September 1943, the Chairman of the Committee on Navigation and Maritime Legislation of the Maritime Association of the Boston Chamber of Commerce in a letter to the Commissioner of the Massachusetts Department of Public Works presented two other alternative suggestions with respect to coordination of a seaplane base with the enlargement of the Commonwealth Airport. His first suggestion, which was stated to be that preferred by the Association, was that the east-west runways be altered so that their easterly ends would not encroach on the authorized seaplane channel in the vicinity of Apple Island and that a seaplane basin and landing be provided at the inner end of this channel northwest of Apple Island between the southerly shore of Winthrop and the proposed northerly limit of the airport. His second suggestion was that a seaplane channel be provided to the southward of and skirting Governors Island and running northward and well clear of the Bird Island Anchorage to the existing seaplane channel at the southwest end of the airport.

21. A study of these suggestions was made by the Massachusetts Department of Public Works and, under date of 9 September 1943, the Commissioner of that Department, in a letter to the District Engineer, stated:

> "The plan submitted by the Chamber of Commerce for a seaplane base at the easterly end of the airport development indicates a moving back of the easterly end of one of the runways and changing the direction so that the westerly end would terminate at the junction with a north and south runway. Although the Department's plan as approved in February is the one used to show these changes, it is noted that such changes would be troublesome in that the runway would head directly into the oil pier constructed by the Navy. Further study by the Department indicates that to avoid buildings in the city, these two runways may have to be located even further south than originally thought possible ... .
>
> "A seaplane landing in areas far to the easterly end of the airport would be quite remote from offices and warehouses so that such a location would not be so very desirable."

With respect to the suggested seaplane channel southerly of and skirting Governors Island, under date of 24 September 1943 the Commissioner stated:

> "This would enable a seaplane to get within the danger zone of the runways.
>
> "I enclose herewith another scheme more nearly what was discussed at our recent conference in your office (i.e., that of 27 August), and one which was shown on the 'February' plan, which would bring the seaplanes outside of the approach area."

The plan presented with the Commissioner's letter of 24 September 1943 is the plan of improvement considered in this report.

22. While the representatives of the Maritime Association of the Boston Chamber of Commerce were the most insistent in urging that a recommendation for abandonment of the presently authorized seaplane channel and basin be accompanied by a recommendation for a substitute similar improvement at another location, other interests represented at the conference of 27 August expressed somewhat the same sentiment, although with less insistence that the authorization of a seaplane base at another locality should be considered a matter of immediate necessity. The Chairman of the Governing Board of the Maritime Association, in addressing the conference with respect to his reasons for believing that a seaplane base at another location in Boston Harbor should be recommended concurrently with any recommendation for the abandonment of the presently authorized seaplane channel, said:

> "We look forward to seaplanes being extensively used in the heavy cargo and passenger service which will be, of course, as we have been reading lately in our newspapers, from Boston to England and to the continent. That is going to be, I suppose, a very heavy traffic. .... We must look forward to land planes bringing passengers into the airport and transferring them, perhaps on a 15-minute schedule, into seaplanes going across to England and the continent. .... We desire that any action taken shall be by way of amending that (i.e., the authorized seaplane channel) to shift it to another location, rather than merely a flat repeal. That is the position of our organization."

23. The Chairman of the Committee on Aviation of the Boston Chamber of Commerce stated that about two years ago his committee was very much in favor of the seaplane channel as now authorized, but that since that time developments in airplanes have been such as to make it important to extend

the airport as now planned, and that the present opinion of his committee is that the present layout of the seaplane channel and basin becomes an impossible one. He concluded his remarks by stating that, although he strongly favored the abandonment of the seaplane channel as presently authorized, he did not favor abandonment of a seaplane base at the airport if there were going to be any seaplanes at all, as he thought there should be a place there to land them.

24. The Acting Chairman of the Boston Port Authority stated that, while that organization is definitely favorable to such relocation of the seaplane channel as is necessary to permit the required construction for land based planes, "to such extent as the near future may indicate that seaplanes are in the picture, naturally it is the desire of the Port Authority, to that extent, that adequate facilities be provided".

25. The Manager of the Maritime Association urged that it be made clear in this report that the Maritime Association does not disapprove the plan for a seaplane channel on the southerly side of the airport, shown on the accompanying map, and that attention be drawn to the fact that it would cost very much less than the authorized seaplane channel. He also stated it as his belief that the matter of land planes versus seaplanes ought to be gone into thoroughly, even with a view to ascertaining what types of planes foreign nations plan to use.

26. There has been no offer of local cooperation in connection with the desired improvement.

27. Commerce and traffic (air).- The improvement desired by the proponents of a seaplane channel and basin in Boston Harbor is admittedly in the interest of the anticipated post-war expansion of air commerce, in which the proponents of the desired improvement expect that the seaplane will play an important part. While it is generally conceded that air commerce will expand with great rapidity after the war, it is impossible at this time to present any figures concerning such future expansion which would be based on anything but pure conjecture, and therefore would be

valueless from a factual point of view. Because the present airport is small and far below airport standards of even the immediate present, any statistical data with respect to air commerce and traffic based on present operations there would be of no value for the purposes of this report, since it would be worthless in estimating the future operations at the Commonwealth Airport after its planned development has been completed.

28. Survey.- A sounding survey of the area described in paragraph 29, "Plan of improvement", was made on 6 and 8 October 1943. No probings were taken as it is believed a depth of 12 feet at mean low water can be obtained without encountering ledge. The accompanying map, marked "Boston Harbor, Massachusetts", File No. 1593 F-6-1, shows the latest soundings and other general features.

29. Plan of improvement.- The plan of improvement considered herein is a seaplane channel 12 feet deep at mean low water, 1,200 feet wide, and about 1,900 feet long, extending shoreward from the north limit of the Bird Island 30-foot anchorage, with a docking area of the same depth at its inner end varying in width from 600 to 300 feet in a length of about 650 feet.

30. The estimate for dredging given below includes engineering and contingency costs and provides for an overdepth allowance of 3 feet. The quantity is in terms of place measurement. The unit price is based on the work being done by contract and the disposal of all excavated material at sea.

675,500 cubic yards dredging @ 60¢ per cubic yard ... $405,300

Estimated annual maintenance cost ..... $ 1,000

31. Were the improvement outlined in paragraph 29 above to be carried out using Federal funds, it would require a change in the established U. S. combined pierhead and bulkhead line at this locality, since all of the work outlined is shoreward of the existing line.

32. Discussion and conclusions.- The proposed development of the Commonwealth Airport by the Massachusetts Department of Public Works pro-

vides for the immediate construction of one 5,000-foot and three 7,000-foot runways and the ultimate extension to 10,000 feet of these runways and additional runways expected to be constructed later. The only directions in which the airport can be expanded to provide these lengths for the east-west and southeast-northwest runways scheduled for immediate construction, as well as some of the additional runways planned for future construction, are to the north and east, into the areas now proposed to be occupied by the authorized seaplane channel and basin. Expansion of the airport in a southerly direction is precluded by the presence on its southerly side, and in close proximity to it, of the Boston Harbor main ship channel and the 30-foot Bird Island Anchorage. Since the development of the airport at Boston into a Class A airport for land planes is conceded by all local interests to be of primary importance, abandonment of the existing project for the seaplane channel and basin authorized by the River and Harbor Act of 17 October 1940 becomes a necessity, for the reason that this authorized project would prevent the proposed development of the airport.

33. The question of the necessity for the authorization at this time of a seaplane channel and basin at another location in Boston Harbor has been given careful consideration by this office and the weight of the evidence is against such a recommendation at the present time. In his remarks at the conference of 27 August, the Chairman of the Committee on Aviation of the Boston Chamber of Commerce stated:

> "It has been my privilege over the past two years as Chairman of this Committee and as President of the Aeronautical Association of Boston to hear expressions of opinion from speakers that have come to Boston representing most of the major airplane lines. So far as they have expressed any opinion about it, it seems to be almost the universal opinion of those gentlemen that fashions in airplanes have changed to such an extent that when the war is over there may not be any great demand for seaplanes as against planes that land on the ground. A representative of Pan American, which is the line that now uses more seaplanes than any other line, was in Boston within two weeks and at that time expressed the view to me in my office that he thought the plane of the future for overseas traffic would not be a seaplane; it would be a land plane flying over water ...".

The representative of the Civil Aeronautics Administration present at the conference, the Airport Engineer from their Boston office, stated:

"I think that at least nine out of ten aeronautical engineers would thoroughly agree with the statement that a land plane is a more efficient plane than a seaplane. The hull of a seaplane has to be built strong enough to carry the load that is carried in a plane, but also it has to be constructed much stronger in order to stand the pounding of the waves when landing and taking off on rough waters. As I said, I think most everybody will agree that a land plane is more efficient and will carry more pay load; and, therefore, the airlines are thinking in terms of land plane operation now instead of seaplanes."

The Massachusetts Institute of Technology consultant to the Massachusetts Department of Public Works in connection with the development of the Commonwealth Airport stated at the conference:

"In the course of our studies concerning the airport, we have consulted a great many airline operators and particularly have asked their opinion on the subject of the future of the seaplane. Almost invariably they have said their anticipated long range operations will be done almost exclusively by the land plane. Pan American has shown little interest in using Boston, or even looking for facilities at Boston, for operation of their planes. These companies that now anticipate transoceanic flying all intend to do it with land based airplanes. Such information as we have been able to obtain from people connected with Pan American, the largest operator of seaplanes, indicates that their future long distance flights are expected to be done with land planes. In view of these investigations, we are concentrating our efforts on the land plane facilities for Boston."

34. While the statements quoted above indicated that the seaplane would not be an important factor in transatlantic service, at least in the early post-war period, it was considered that the best way to arrive at a sound conclusion as to the necessity for providing a seaplane channel and basin at Boston for the benefit of post-war seaplane traffic would be to canvass the major airline companies for an expression of their views as to the probable place of the seaplane in post-war transatlantic service. Accordingly, letters were sent to eight of the leading companies requesting their opinions as to the probability of the extensive use of seaplanes in such service after the war; information as to the type of plane they expect to use if they plan to engage in such service; and a statement as to whether they would be interested in using Boston as a terminal for seaplane flights if adequate facilities were available, this latter information being desired in the event it was their plan to use seaplanes. The companies

from which information was requested were: American Airlines, Inc.; Colonial Airlines, Inc.; Eastern Airlines, Inc.; Northeast Airlines, Inc.; Transcontinental & Western Air, Inc.; United Airlines Transport Corporation; American Export Airlines, Inc.; and Pan American Airways System. Detailed and very informative replies were received from all but American Export Airlines, which concern, under date of 6 October 1943, acknowledged receipt of the letter of request and stated that a further reply could be expected. However, to date none has been received, even though a telegram requesting a reply was sent them on 14 October.

35. There are quoted below especially pertinent passages from the letters of the seven companies which responded to the letter of this office:

American Airlines, Inc.:

"In our opinion, seaplanes will not be used extensively for transatlantic passenger and freight service after the war.

"Our Company expects to engage in transatlantic air service - passenger, freight, and a combination of both - after the war.

"We expect to use multi-engined land type planes because we believe they are more efficient than seaplanes and equally as safe."

Colonial Airlines, Inc.:

"In my opinion, seaplanes will not be used extensively for transatlantic passenger and freight service after the war. Seaplanes are uneconomic, expensive to operate and the necessity for water for landing greatly limits their use.

"We have not decided definitely whether or not we intend to engage in transatlantic air service after the war. ...

"If we do engage in transatlantic air service, our intention is to use the best available land planes and we have no intention or desire to use the seaplane for the reasons given above. ...

"In conclusion, I would like to say that I consider the expenditure of any great amount of money for the dredging of a seaplane channel to be a waste of funds. Aviation, in order to justify its existence, must save time and service must be rendered on a basis tending to justify continued use by travelers, shippers, etc.

"Seaplanes could not compete in international trade with land planes having a long cruising radius. In the winter time the frozen conditions of the water in and around Boston would render the use of seaplanes undesirable, if not dangerous."

Eastern Air Lines, Inc.:

"We do not believe that seaplanes will be used extensively for transatlantic operation for quite sometime after the war, inasmuch as the largest aircraft now planned is a 100-passenger land plane. ... It is possible, however, that larger flying boats may be developed five years hence, when gross weight becomes more favorable to their economical operation.

"We do not contemplate transatlantic air service at the present time, although there may be a possibility that we may engage in this type of service in the postwar period.

"If we do, the type of airplane which will probably be used will be a large capacity land plane which, up to 200,000 lbs. gross weight, appears to have the advantage of greater speed and economy of operation."

Northeast Airlines, Inc.:

"Seaplanes will not be used extensively in the early postwar period but may eventually be used when plane sizes approach the maximum that land plane landing equipment can economically support.

"Northeast Airlines has applied to the Civil Aeronautics Board for authority to conduct mail, passenger and express service between the terminal points Boston, and London, Paris and Moscow via various intermediate points.

"Within the predictable future, we expect to use land planes for transatlantic operations. ...

"It is unlikely that we would be interested in using a transatlantic seaplane base at Boston within the predictable future. If the trend of air transport development points to the use of seaplanes in the more distant future, we believe there will be ample time to prepare bases before the equipment is available."

Pan American Airways System:

"Our answers to your specific questions are as follows:

(Q: In your opinion, will seaplanes be extensively used for transatlantic passenger and freight service after the war?)

"No, not from American ports north of Norfolk or Baltimore.

(Q: Does your company expect to engage in transatlantic seaplane commerce (passenger, freight, or a combination of both) after the war?)

"No, since it does not presently appear to us that the next stage of our transatlantic air service will involve the use of flying boats.

(Q: Would you be interested in using Boston as a terminal for post-war transatlantic seaplane flights if adequate facilities were available?)

"For the reasons given above, no, within the limits of our

'next stage' of transatlantic air service. We make no attempt to prophesy the possible availability of flying boats for transatlantic service at some future stage. Our Company has frequently changed from flying boats to land planes and vice versa, and will continue to do so in the future should all circumstances justify it.

"As you are well aware, there is a great controversy between the merits of the land plane and the flying boat for long distance commercial service. We take no sides in this controversy and shall use whichever type is best suited to our many different routes. In our opinion, if the flying boat is to find itself at a disadvantage anywhere, it will be primarily on the North Atlantic route. More specifically, we believe that flying boats would experience great difficulty in using Boston Harbor for a year-round commercial service, because of the presumed difficulties with surface ice. This does not, of course, preclude the possibility of flying boats being used on the North Atlantic service during peak loads in the summertime."

Transcontinental & Western Air, Inc.:

"As our experience, domestic as well as international, has been exclusively in the use of land planes, we are unable at this time to express an opinion as to the extent to which seaplanes will be employed in transatlantic passenger and freight service after the war. The fact that they are now so employed and that larger seaplanes are under construction would indicate their continued use, even though the trend appears to be toward the more extensive use of land planes in overseas operation.

"It is our present intention, if our transatlantic application is granted, to use multi-engine land planes of a high-speed, long-range type. Our future use of seaplanes depends upon the development of this type of aircraft and the relative efficiency of seaplanes and land planes in long-range operations.

"The overall efficiency and economy of the design of present land planes and those now being developed appear to be superior to those of any seaplane design so far examined. Land planes have the additional advantage of being able to serve both transcontinental and over-ocean routes.

".... TWA is not immediately interested in using a seaplane base at Boston. We urge that such a seaplane base present no obstacle to the expansion of the Boston airport as now planned. On the other hand, our views on this subject should not be taken to indicate in any manner whatsoever that we would raise objection to the development of a suitably located seaplane base at Boston."

United Air Lines Transport Corporation:

"We do not believe that seaplanes will be extensively used for freight and passengers during the early postwar years. It is true, however, that as airplanes become larger and the landing gear presents an increasing weight problem, the large flying boat will become increasingly important competition for the land plane.

"Our company will engage in transatlantic air service - passenger and freight and a combination of both - if a policy

permitting domestic air carriers to operate in international transocean service is approved by our Government after the war. ...

"If we should operate across the Atlantic, it is our present plan to use four or six engine land planes. We believe that land planes up to 100-passenger capacity will be best suited for transatlantic operation."

36. Nothing is known of the views of the American Export Airlines, Inc. However, the fact that no reply was received from them to the letter of inquiry sent them by this office would indicate that they are not interested in the development of seaplane facilities at Boston.

37. The weight of the evidence at hand is conclusively to the effect that, in the reasonably prospective future, the land plane will be used wherever its use is possible, for the reasons, as stated by practical airline operators, that it is more efficient and more economical to operate than the seaplanes which have so far been developed, and equally as safe.

38. It appears that, in view of the expressed intention of the major airline operators to use land planes for the North Atlantic service in their initial post-war operations, provision at the present time of a seaplane base at Boston to accommodate reasonably prospective transatlantic traffic is unwarranted. Although the seaplane may be utilized for heavier loads at some time in the future, it is not believed that this development is sufficiently imminent to warrant authorizing a seaplane base at Boston now. Furthermore, it is impossible at this time to forecast accurately the needs of such seaplanes. It is apparent that there could be no justification for the expenditure of Federal funds in the provision of an improvement for which there is no present or reasonably prospective need. It is equally apparent that, so long as there is any possibility of commercial or military use of seaplanes, full consideration should be given, in connection with future developments in Boston Harbor, to the possible ultimate need for a seaplane base. Neither the abandonment of the present authorized channel nor the proposed development of the Commonwealth Airport will prevent the future provision of a seaplane base in Boston Harbor since other equally suitable locations for such a base will exist after completion of the airport.

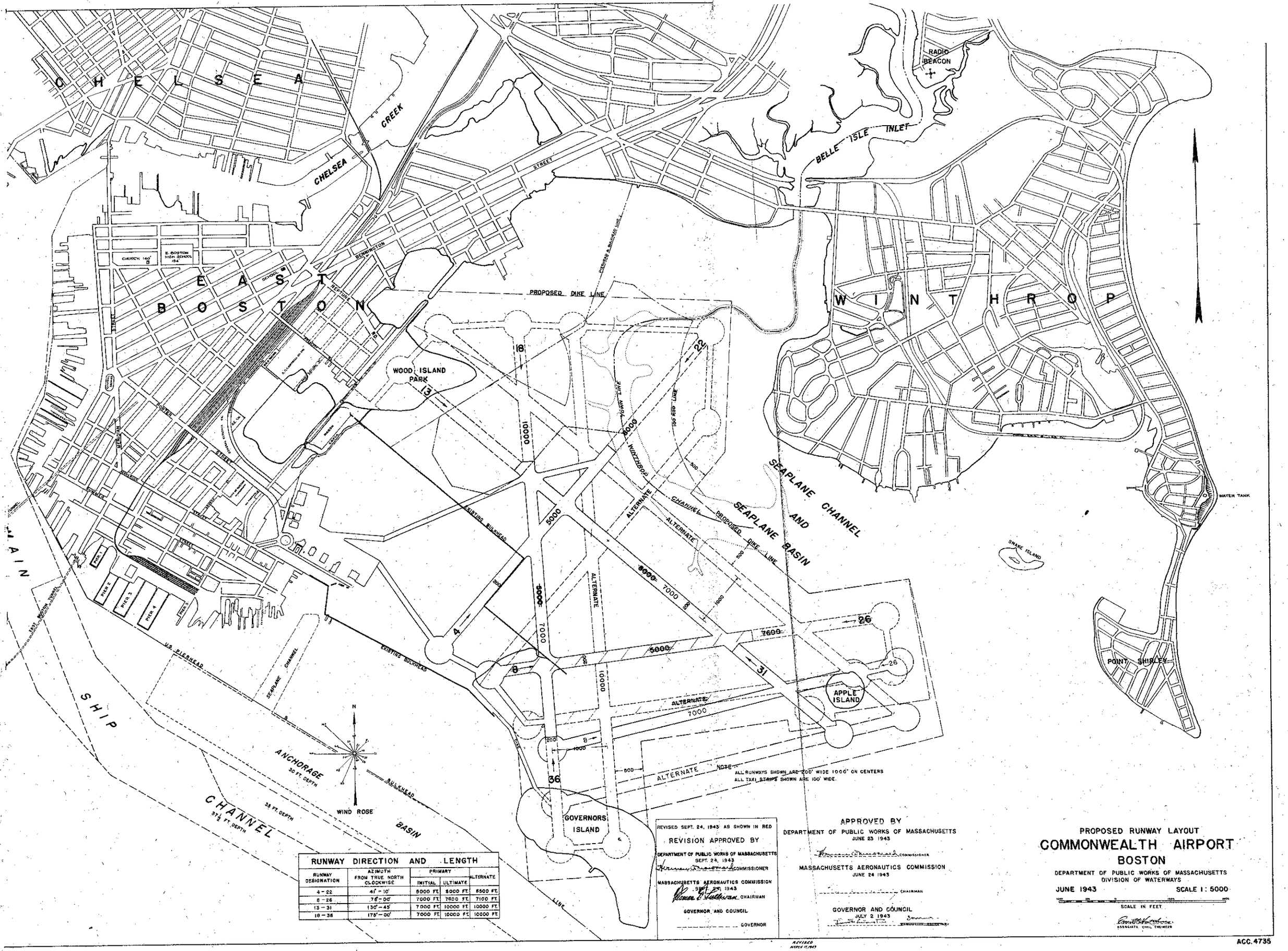
39. In view of the above, the district engineer concludes that pro-

vision of a seaplane channel and basin at any location in Boston Harbor, Massachusetts, is not warranted at the present time. However, in stating this conclusion, he draws attention to the fact that assurance has been given local interests that the abandonment of the authorized project for a seaplane channel and basin in Boston Harbor will not be prejudicial to a future study of such an improvement at another location should future developments be such as to warrant consideration of such an improvement.

40. Recommendation.- The district engineer recommends that legislation be enacted authorizing the abandonment of that part of the existing project for Boston Harbor, Massachusetts, recommended in House Doc. No. 362, 76th Congress, 1st session, and authorized by the River and Harbor Act of 17 October 1940; namely, the provision of a seaplane channel 12 feet deep and 1,500 feet wide, extending northwesterly from President Roads 17,500 feet to the easterly margin of Boston Airport (now officially designated the General Edward Lawrence Logan Airport) and deposit of excavated material in such places as will permit enlargement of the airport.

Bruce D. Rindlaub
Lt. Col., Corps of Engineers
District Engineer

Inclosures:
Map File No. 1593 F-6-1
Print of plan dated June 1943



RUNWAY DIRECTION AND LENGTH				
RUNWAY DESIGNATION	AZIMUTH FROM TRUE NORTH CLOCKWISE	PRIMARY		ALTERNATE
		INITIAL	ULTIMATE	
4 – 22	41° – 10'	5000 FT.	6000 FT.	6500 FT.
8 – 26	76° – 00'	7000 FT.	7600 FT.	7100 FT.
13 – 31	130° – 45'	7000 FT.	10000 FT.	10000 FT.
18 – 36	175° – 00'	7000 FT.	10000 FT.	10000 FT.

NOTE
ALL RUNWAYS SHOWN ARE 200' WIDE 1000' ON CENTERS
ALL TAXI STRIPS SHOWN ARE 100' WIDE.

REVISED SEPT. 24, 1943 AS SHOWN IN RED
REVISION APPROVED BY
DEPARTMENT OF PUBLIC WORKS OF MASSACHUSETTS
SEPT. 24, 1943
COMMISSIONER
MASSACHUSETTS AERONAUTICS COMMISSION
SEPT. 25, 1943
CHAIRMAN
GOVERNOR AND COUNCIL
GOVERNOR

APPROVED BY
DEPARTMENT OF PUBLIC WORKS OF MASSACHUSETTS
JUNE 23 1943
COMMISSIONER
MASSACHUSETTS AERONAUTICS COMMISSION
JUNE 24 1943
CHAIRMAN
GOVERNOR AND COUNCIL
JULY 2 1943

PROPOSED RUNWAY LAYOUT
COMMONWEALTH AIRPORT
BOSTON
DEPARTMENT OF PUBLIC WORKS OF MASSACHUSETTS
DIVISION OF WATERWAYS
JUNE 1943 SCALE 1 : 5000
SCALE IN FEET
ASSOCIATE CIVIL ENGINEER

REVISED MARCH 17, 1943

ACC. 4735

WAR DEPARTMENT

CORPS OF ENGINEERS, U. S. ARMY

BOSTON HARBOR
MASSACHUSETTS

IN 1 SHEET

SCALE 1:10000

1000 500 0 1000 2000 3000 4000 FT.

U. S. ENGINEER OFFICE, BOSTON, MASS., 16 OCTOBER 1943

APPROVAL RECOMMENDED
John E. Allen
CHIEF ENGINEERING DIVISION

APPROVED:
Bruce D. Rudlank
LT. COLONEL, CORPS OF ENGINEERS
DISTRICT ENGINEER

SUBMITTED
E. Evans / T. Murphy
PRINCIPAL ENGINEER

TRANSMITTED WITH REPORT DATED 8 NOVEMBER 1943.

FILE NO. 1593-F-6-1

NO.	CHARACTER	DATE	BY
	REVISIONS		

CITY BY: A.D.V.
DR. BY: A.D.V.
TR. BY: A.D.V.
CH. BY: J.W.H.

BELLE ISLE INLET

CHARLESTOWN

CHANNEL

B. & A. R.R.

BOSTON

EAST BOSTON

35-FT.

E. BOSTON TRAFFIC TUNNEL

E. BOSTON TRAFFIC TUNNEL

WOOD ID PARK

EXISTING PIERHEAD & BULKHEAD LINE

DREDGED TO 6 FEET AT M.L.W. BY COMM. OF MASS.

AUTHORIZED SEAPLANE CHANNEL - 1500' WIDE, 12' DEEP AT M.L.W. (recommended for abandonment).

WINTHROP

GENERAL EDWARD LAWRENCE LOGAN AIRPORT (COMMONWEALTH AIRPORT)

EXISTING BULKHEAD

30' & 35' CHANNEL TO FUEL OIL PIER

JEFFRIES PT.

DESIRED SEAPLANE CHANNEL

PRESENT SEAPLANE CHANNEL

PRESENT SEAPLANE RAMP AND RAILWAY

BULKHEAD

ALTERNATE

NOODLE ISLAND FLATS

DREDGED TO 8 FEET AT M.L.W. BY COMM. OF MASS.

SNAKE ID.

DREDGED TO 10 FEET AT M.L.W.

APPLE ID.

PT SHIRLEY

DEER ISLAND

N.Y.N.H. & H. R.R.

SOUTH BOSTON

BIRD ISLAND ANCHORAGE

ISLAND FLATS

BN. A

BN. B

BN. C

F STREET CHANNEL

FT POINT CHANNEL

RESERVED CHANNEL

BULKHEAD

DIKE

GOVERNORS ISLAND

GOVERNORS ISLAND FLATS

APPLE ISLAND FLATS

ALTERNATE

EXISTING PIERHEAD & BULKHEAD LINE

35-FT. CHANNEL

40-FT. CHANNEL

PLEASURE BAY

CASTLE ID.

40' ANCHORAGE

DEER ID. LT.

PRESIDENT ROADS

VICINITY MAP

SCALE OF FEET

5000 0 5000 10000 FT.

TRACED FROM U.S.C.&C.S. CHART NO. 1207

BROAD SOUND

MERIDIAN ST. BR.

CHELSEA

CHELSEA ST. BR.

30' CHANNEL

MYSTIC R.

CHARLESTOWN

CHELSEA CR.

EAST BOSTON

WINTHROP

35' CHANNEL

SNAKE I.

BOSTON

FORT POINT CHANNEL 23' CHANNEL

APPLE ID.

GOVERNORS

PT. SHIRLEY

DEER ID.

SOUTH BOSTON

35' CHANNEL

40' CHANNEL

ANCHORAGE

DEER ID. LT.

PRESIDENT ROADS

BOSTON HARBOR

GRAVES LT.

CALF ID.

OUTER BREWSTER

MIDDLE BREWSTER

GREAT BREWSTER

BOSTON LT.

LOVELL ID.

SPECTACLE ID.

LONG ID.

GALLUPS ID.

GEORGES ID.

27' CHANNEL

THOMPSON ID.

DORCHESTER BAY

RAINSFORD ID.

NANTASKET ROADS

PT. ALLERTON

PEDDOCKS ID.

HINGHAM BAY

BUMKIN ID.

GRAPE ID.

HINGHAM HARBOR

QUINCY BAY

NEPONSET R.

MYSTIC R.

WEYMOUTH FORE R.

WEYMOUTH BACK R.

LOCALITY MAP

SCALE OF MILES

10 0 50 100 MI.

MAINE

NEW HAMPSHIRE

BOSTON DISTRICT BOUNDARY

MERR.

PORTLAND

PISCATAQUA R.

PORTSMOUTH

NEWBURYPORT

MASSACHUSETTS

BOSTON HARBOR

BLACKSTONE R.

BROCKTON

PROVINCETOWN

RHODE ISLAND

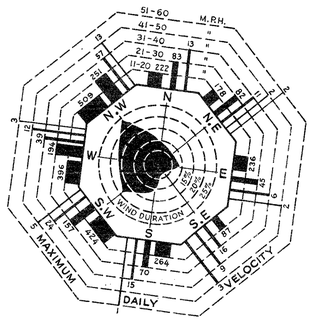
CAPE COD CANAL

CAPE COD BAY

ATLANTIC OCEAN

N

WIND DIAGRAM FOR BOSTON HARBOR, MASS. 1927-1937



DATA TAKEN FROM OBSERVATIONS BY THE U.S. WEATHER BUREAU STATION AT BOSTON, MASS.

LEGEND

MEAN HIGH WATER LINE

MEAN LOW WATER LINE

12-FT. CURVE OF DEPTH

SOUNDINGS BELOW MEAN LOW WATER 16.5

SOUNDINGS ABOVE MEAN LOW WATER ..... +1.3

NOTE: SOUNDINGS IN THE DESIRED SEAPLANE CHANNEL WERE MADE ON 6 AND 8 OCTOBER 1943.

DEPTHS SHOWN IN THE DESIRED IMPROVEMENT AND IN THE AUTHORIZED SEAPLANE CHANNEL ARE EXPRESSED IN FEET AND TENTHS AND ARE REFERRED TO THE PLANE OF MEAN LOW WATER AS INDICATED BY THE BENCH MARK. ALL OTHER DEPTHS, AS WELL AS THE SHORE LINE AND WHARVES WERE TAKEN FROM AN ENLARGEMENT OF U.S. C.& G.S. CHART NO. 246.

BENCH MARK: THE TOP OF THE COPING AT THE ENTRANCE TO THE OLD DRYDOCK AT THE CHARLESTOWN NAVY YARD. THE ELEVATION IS 14.69 FEET ABOVE MEAN LOW WATER.

THE PROPOSED LAYOUT OF THE "GENERAL EDWARD LAWRENCE LOGAN AIRPORT" WAS TAKEN FROM A MAP PREPARED BY THE DEPARTMENT OF PUBLIC WORKS DIVISION OF WATERWAYS OF MASSACHUSETTS. THE FULL LINES OF THE LAYOUT SHOW THE PROPOSED INITIAL DEVELOPMENT.